INK JET RECORDING HEAD AND METHOD OF PRODUCING A PLATE MEMBER FOR AN INK JET RECORDING HEAD

This is a divisional of Application No. 09/489,893 filed January 24, 2000, (now U.S. Pat 6,666,547) the disclosure of which is incorporated herein by reference.

BACKGROUND OF THE INVENTION

The present invention relates to an ink jet recording head in which a piezoelectric vibrator of a longitudinal vibration mode is used as a driving source, and more particularly to a structure of an elastic plate which receives a pressure due to a displacement of a piezoelectric vibrator, and also to a method of producing such a plate.

In order to improve the recording density, the pitch of nozzle opening rows tends to be reduced. To comply with this tendency, a single crystal silicon wafer is isotropically etched, and a nozzle plate and an elastic plate which are produced another method are fixed to the etched wafer, thereby configuring a channel unit. A displacement of a piezoelectric vibrator is transmitted to the channel unit so as to produce a pressure in a pressure generating chamber, and an ink droplet is ejected from a nozzle opening by the pressure.

When pressure generating chambers are arranged in high density, each of the pressure generating chambers has a very small width. In order to cause the whole of the longitudinal direction